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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,371	12/15/2000	Franck Barillaud	AUS920000805US1	9807
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EXAMINER CHEA, PHILIP J				
ART UNIT 2153		PAPER NUMBER		
NOTIFICATION DATE 04/08/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/738,371

Applicant(s)

BARILLAUD ET AL.

Examiner

PHILIP J. CHEA

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-12, 14-20 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-12, 14-20 and 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

This Office Action is in response to an Amendment filed January 17, 2008. Claims 1,4-12,14-20,22-26 are currently pending, of which claims 22-26 are new. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 103

1. Claims 1,4-12,15-19,22-23,25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfieri et al. (US 5,666,486), herein referred to as Alfieri, and further in view of Liron (US 5,598,532) and further in view of Bereiter (US 5,909,217).

As per claims 1, and 15, Alfieri discloses a method for allocating a service on a network, as claimed, comprising:

collecting a set of performance data (see column 10, lines 40-46, where performance statistics implies the collection of performance data);

identifying a plurality of node clusters in response to said collection of said set of performance data (see column 10, lines 40-46, where a service is registered to particular nodes that are chosen based on performance statistics);

correlating at least one property of each of the identified node clusters with at least one performance rule to determine a compliance of the node cluster to the performance rule (see column 10, lines 54-60);

a map as a result of said correlation, said map including a first cluster of said plurality of clusters for supporting the service on the network (see Alfieri column 9, line 56 – column 10, line 5, where a map is considered tracking (i.e. mapping nodes to clusters) which nodes are in the cluster and where the service has been allocated); and

allocating the service to one of the complying node clusters (see column 11, lines 7-25, where a client service is allocated to a particular node cluster).

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Although the system disclosed by Alfieri shows substantial features of the claimed invention (discussed above), it fails to disclose that the performance data is representative of a set of physical characteristics of the network.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Alfieri, as evidenced by Liron.

In an analogous art, Liron discloses collecting a set of performance data representative of a set of physical characteristics of the network (see column 5, lines 19-36).

Given the teaching of Liron, a person having ordinary skill in the art would have obviously recognized the desirability and advantages of modifying Alfieri by collecting performance data representative of a set of physical characteristics of the network, such as disclosed by Liron, in order to improve traffic flow and balance traffic flow requirements between work groups (see Liron column 2, lines 12-22).

Although the system disclosed by Alfieri in view of Liron shows substantial features of the claimed invention (discussed above), it fails to disclose showing the map.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Alfieri in view of Liron, as evidenced by Bereiter.

In an analogous art, Bereiter discloses a large system status map provided to the user at three different levels of detail (see Abstract). Bereiter also showing a map of a first cluster of a plurality of clusters (see column 4, lines 35-43), where the cluster can be shown based on chosen characteristics such as, displaying a status of a software distribution to the cluster (see column 6, lines 7-12).

Given the teaching of Bereiter, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Alfieri in view of Liron by showing a map, such as disclosed by Bereiter, in order to zoom in on selected clusters in a large scale distributed computing environment. Furthermore, since Bereiter shows a selection of a cluster to show based on the percentage complete of a software distribution, it would be obvious that the system of Bereiter could be used to show a cluster that is selected for service allocation.

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As per claim 4, Alfieri further discloses wherein the map includes at least one server within the first cluster for supporting the service on the network (see column 10, lines 23-29, where on node (server) is fulfilling the obligations of the specified client service).

As per claim 5, Alfieri further discloses allocating the service to the first server (see Alfieri column 10, lines 23-25).

As per claims 6, 10, and 17, Liron further disclose wherein collecting the set of performance data representative of the set of physical characteristics of the network comprises probing the network for a round trip time (see column 6, lines 42-44 and column 8, lines 3-17). In order minimize the delay time, the round trip time is implied within that calculation.

As per claims 7, 11, and 18, Liron further discloses wherein collecting the set of performance data representative of the set of physical characteristics of the network comprises probing the network for a hop count (see column 6, lines 46-48).

As per claims 8, 12, and 19, Liron further discloses wherein collecting the set of performance data representative of the set of physical characteristics of the network comprises probing the network for bottleneck link speed (see column 6, lines 54-57). In order to minimize the link bandwidth, the link speed is inherent in that calculation.

As per claims 9 and 16, Alfieri in view of Liron in view of Bereiter disclose a distributed computer system, as claimed, comprising:

- a plurality of interconnected nodes (see Liron column 5, lines 23-32); and

- a server operable to allocate a service for said plurality of interconnected nodes, said server including (see Alfieri column 9, lines 56-58)

- a probe operable to provide a set of performance data as related to a set of physical characteristics of said plurality of interconnected nodes (see Liron column 5, lines 19-36),

- a module operable to identify a plurality of node clusters within a network in response to said set of performance data (see Alfieri column 10, lines 40-46, where a service is registered to particular nodes that are chosen based on performance statistics); and

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an engine operable to utilize at least one performance rule for said plurality of node clusters as related to said service to identify a first node cluster of said plurality of node clusters for supporting said service for said plurality of interconnected nodes (see Alfieri column 10, lines 54-60),

wherein the engine is further operable to show a map (see Bereiter column 4, lines 35-43) representative of each node cluster in compliance with at least one performance rule as related to the service and to allocate the service to one of the complying node clusters (see Alfieri column 9, line 56 – column 10, line 5, where a map is considered tracking which nodes are in the cluster where the service has been allocated).

As per claim 22, Alfieri in view of Liron in view of Bereiter disclose a method for allocating a service on a network, the method, as claimed, comprising:

receiving logical data associated with a logical configuration of a distributed data processing system, the distributed data processing system including a plurality of clients and plurality of servers, wherein the clients and servers communicate over the network, and wherein each server provides at least assigned one service (see Alfieri column 9, line 67 - column 10, line 5), and wherein the logical data includes data indicating the interconnections of the distributed data processing system (see Liron column 5, lines 23-32, describing an interconnection of a central shared resource and a plurality of clients);

collecting performance data based on the logical data, the performance data representative of at least on physical characteristic of the distributed data processing system (see Alfieri column 10, lines 40-46, where performance statistics implies the collection of performance data);

determining cluster data identifying each node cluster within the distributed data processing system based on the collected performance data (see Alfieri column 10, lines 40-46, where a service is registered to particular nodes that are chosen based on performance statistics);

correlating the determined cluster data with at least one performance rule (see Alfieri column 10, lines 54-60);

showing at least one map based on the correlation (see Bereiter column 4, lines 35-43); and

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allocating the service on the network based on the showing of the map (see Alfieri column 9, line 56 – column 10, line 5).

As per claim 23, Liron further discloses that the performance data includes round trip time, hop count and bottleneck speed (see column 6, lines 42-44 and column 8, lines 3-17, see column 6, lines 46-48 and see Liron column 6, lines 54-57).

As per claim 25, Alfieri in view of Liron in view of Bereiter further discloses issuing a probe from a module, wherein the logical data is received at the module responsive to issuing the probe (see Liron column 5, lines 19-36), and wherein an engine correlates the determined cluster data with at least one performance rule (see Alfieri column 10, lines 40-46).

As per claim 26, Alfieri in view of Liron in view of Bereiter further discloses allocating the service to one of the complying node clusters based on the map (see Alfieri column 10, lines 1-5, showing the allocation of a client service on a node).

2. Claims 14,20,24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfieri in view of Liron in view of Bereiter as applied to claims 9,16,22 above, and further in view of Johnson (U.S. 6,078,946). Although Alfieri in view of Liron in view of Bereiter disclose substantial features of the claimed invention (discussed above), it fails to directly disclose the module being a neural network. However, these features are well known in the art and would have been an obvious modification of the system disclosed by Alfieri in view of Liron in view of Bereiter, as evidenced by Johnson.

In an analogous art, Johnson discloses a network management system, which uses a self organizing neural network module for optimizing resources (see column 3, lines 6-30 and column 5, lines 41-46).

Given the teaching of Johnson, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Alfieri in view of Liron in view of Bereiter by employing a neural network module, such as disclosed by Johnson, in order to gain the best results available for a set of input data (column 3, lines 19-23).

Response to Arguments

3. Applicant's arguments filed January 17, 2008 have been fully considered but they are not persuasive.

A) Applicant contends that Alfieri does not provide a map, Liron does not teach using the performance data to show a map, and Bereiter does not disclose that the map is a result of a correlation between properties of the node clusters and performance rule.

In considering A), the Examiner believes that the combined references teach the limitations of the claims. Liron and Bereiter provide teachings that would allow one of ordinary skill in the art to make up the deficiencies of Alfieri. Liron discloses in analogous art a system where a server is to be placed in a location that is optimal to a plurality of clients, showing collecting a set of performance data representative of a set of physical characteristics of the network (see column 5, lines 19-36). Alfieri already showed mapping (i.e. a map as a result of correlation of performance data (see column 10, lines 54-60)) client services to nodes (see column 9, line 56 – column 10, line 5). However, did not show details of showing the map of the node cluster that was to support the client service. Bereiter is analogous art showing how a map can be shown of node clusters in order to monitor a large scale system by easily focusing on certain clusters of the system (see Abstract). It is obvious that one of ordinary skill in the art would want to combine Bereiter with Alfieri and Liron because it would be advantageous to see the cluster that will be assigned the client services in order to monitor the cluster for any problems before assigning the service to the cluster (see column 6, lines 50-56). Furthermore, the system of Bereiter shows grouping the cluster according to rules, it is obvious that the rule could be grouping it together based on the client service the cluster will provide (see column 7, lines 13-21). Given the teachings of Alfieri, Liron and Bereiter, the Examiner believes that the combined references are enough to teach the claim limitations with motivation that one of ordinary skill in the art would have at the time of the invention.

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Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Glenton B. Burgess/
Supervisory Patent Examiner, Art Unit 2153

Philip J Chea
Examiner

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PJC 3/18/08